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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ARMSTRONG, WESTERMAN & HATTORI, LLP
1725 K STREET, NW
SUITE 1000
WASHINGTON, DC 20006

EXAMINER

LEE, DIANE I

ART UNIT PAPER NUMBER

2876

DATE MAILED: 04/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/282,450

Applicant(s)

KAWAI ET AL.

Examiner

D. I. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8 is/are allowed.
- 6) ☒ Claim(s) 2-7 and 9-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. Receipt is acknowledged of the Amendment filed 12 February 2003. Claim 1 has been canceled; no claims have been amended; and no claims have been newly added. Currently claims 2-12 are pending in this application.

Claim Objections

2. Claim 10 objected to because of the following informalities:

(a) Re claim 10: Claim 10 is a dependent claim that is depends from claim 1, which is canceled by the applicant's response filed 2/12/03. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary.

Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 2-4 and 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minasy et al. [US 4,684,930-referred as Minasy'930] in view of Minasy et al. [US 5,121,103-referred as Minasy'103].

Re claims 2-4: Minasy'930 discloses a commodity information management system (supermarket checkout counter 10) for managing a commodity as well as security thereof based on a bar code and a tag (target 30) attached to the commodity (merchandise 14) (see the abstract, col. 3, lines 30+, col. 4, lines 38+, and figures 1-2), the system comprising:

a bar code reader 40 for reading the bar code (see col. 4, lines 38+ and figure 1);

a deactivator (a target deactivator 42, 44) provided downstream from the reader (just beyond the bar code reader on the checkout counter) for deactivating the tag after the bar code is read by the reader (see col. 4, lines 54+);

a magnetic detector (a pair of spaced apart antenna 20, 22 in the interrogating zone 24 which leads to the store exit) provided downstream from said deactivator (the antenna in the interrogating zone located beyond the counter) for detecting effectivity of the tag, i.e., magnetic field of the tag (see col. 3, lines 42-col. 4, lines 16 and figure 1);

a notifying unit (a light 28 and/or an audible alarm) for notifying an operator of a detection result by the detector (i.e., by producing an alarm such a light 28 or an audible alarm) (see col. 3, lines 53+ and figure 1);

Minasy'930 teaches that the tag that is attached to the commodity having a thin elongated strip of saturable material (see col. 4, lines 17+). As the commodity is place on the counter and carried by the conveyor belt 12 in the direction indicated by an arrow "A" toward the cash register 16 positioned along side of the counter, the commodity is passed over the bar code reader and the tag deactivator. The commodity is carried though the interrogation zone of the exit passageway to detect the effectivity of the tag by the detector, and the notifying unit is activated only when the tag is still activated. Since the tag provides a security measure against shoplifting in the store (i.e., taking out the commodity from the store without a payment), the tag clearly performs the function of security management at an exit of the store and assures that payment for the commodity attached thereon is done.

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Although Minasy'930 teaches the detector provided downstream from the deactivator for detecting affectivity of the tag, he fails to teach or fairly suggest the detector being provided adjacent to the deactivator.

Minasy'103 teaches a checkout station 14, 16 etc. each having an elongated counter 20 having a conveyor 28, 30 for moving the merchandise on the counter top surface (see figure 1). When the packages 10 are placed on the counter 20, they are deactivated. The checkout station includes a detector (antenna assembly 34) provided adjacent to the deactivator and arranged adjacent to the counter top surface (see figure 1).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the checkout station having an antenna assembly as taught by Minasy'103 and modify the placement of the antenna in the system of Minasy'930 in order to immediately notify the affectivity of the tag to the operator before the customer approaching the exit gate. Due to the fact that the detector in the system of Minasy'930 is utilized as a theft detection system to notify the operator when the affectivity of the tag is still activated, such modification would have provided an operator to immediately identify and/or correct the transaction before next transaction is started (i.e., before a transaction for the next customer is started).

Minasy'930 as modified by Minasy'103 does not specifically teach the detector provided on the counter top surface.

Since Minasy'103 teaches that the elongated counter and the antenna assembly includes a transmitter, a receiver, electrical circuits for energizing the transmitter and for processing the electrical signal produced by the receiver, and wherein the electrical circuits may be housed in the base of the antenna assembly or mounted in the counter 20; and Minasy'103 further teaches that the antenna assembly is almost completely isolated (i.e., electro-magnetically) from the counter such that the counter does not affect the operation of the detection system by the antenna (see col. 5, lines 4+), it would have

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been obvious to an artisan of ordinary skill in the art at the time the invention was made to modify the system of Minasy'930 as modified by Minasy'103 by incorporating the antenna on the counter top surface as the reader and deactivator in order to provide a commodity operation in a single continuous downstream manner. By providing the bar code reader, the deactivator, and the detector in single counter top surface would have ensure that each merchandise are read, deactivated, and detected properly as the merchandise is traveled on the checkout counter, and would have provided an immediately verification of the deactivating operation (i.e., immediately identify the effectivity of the tag) and to notify the operator before the customer approaching the exiting the gate.

Re claims 10-11: wherein the tag is made of a magnetic material formed in a thin plate (see col. 4, lines 17-24 and figure 2)

Re claims 9 and 12: Minasy'930 is silent with respect to the specifics of an output unit for outputting a deactivating section-drive signal for driving a deactivating section which deactivates a security tag attached to the commodity.

Minasy'930 teaches that the commodity is carried toward the tag deactivator by the conveyor belt and/or by the operator when the bar code reader reads the bar code data. The deactivator causes the tag to become deactivated so that commodity can be carried through the detector without producing an alarm (see col. 4, line 54-col. 5, line 4). He also states that the deactivator includes a deactivator cylinder 44 with a plurality of permanent magnets 45 arranged with their poles near the surface of the deactivator so as to produce a pattern of oppositely directed magnetic fields (see col. 5, lines 30+ and figures 4-5).

It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to recognize that a plurality of permanent magnets which produce a pattern of oppositely directed magnetic fields is functionally equivalent to an output unit outputting a deactivating section-drive signal for driving a deactivating section for the purpose of deactivating the tag of the commodity so that the detecting unit will not activate the alarm mechanism. Accordingly, such modification would have

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provided Minasy'930 with an additional means for preventing a false alarm. Therefore, it would have been an obvious expedient.

6. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minasy'930 as modified by Minasy'103 as applied to claim 1 above, and further in view of Ruppert et al. [US 5,640,002-referred as Ruppert]. The teachings of Minasy'930 as modified by Minasy'103 have been discussed above.

Re claims 5-6: Although the detector and the notifying unit of Minasy'930 provides the claimed function of the control unit for making a visual and/or an audible report (i.e., notifying the detection result by outputting a signal to activate/inactivate the alarm mechanism) to the effect that the security is not released (i.e., the tag is still activated), Minasy'930 as modified by Minasy'103 does not disclose the system having a host terminal for controlling the operation of the entire system and a reporting unit for reporting the result of detection to the host terminal as an electronic data.

Ruppert discloses a commodity information management system for managing commodities (e.g., supermarket products 500, 504) based on a bar code 506 and a magnetized security tag 507 affixed to the product (see col. 32, lines 1+ and figure 27). The system includes:

- a deactivating unit 518 for deactivating the security tag (see col. 36, lines 24+ and figure 30);

- a detector 516 having a determining unit 538 for determining whether or not security tag has been deactivated according to the detection result (see col. 36, lines 18 and figure 31);

- a host terminal 509 in communication with the check out terminal 501, the deactivator, and the detector for controlling operation of the entire check out system such as monitoring and managing the transaction process including validation, deactivating, updating, and etc. (see figures 27+); and

- wherein the detection notifies the detection result by setting the alarm and transmitting the signal (i.e., electronic data) to the host terminal via signal line 524 (see figure 27).

In view of Ruppert's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the conventional host terminal and its security management function in the system of Minasy'930 as modified by Minasy'103 in order to provide a system that has a control manager that monitors and controls the entire transaction process and to improve the security measures of the merchandise in the store from theft or the like. Therefore, such modification would have enhanced the inventory control and tracking operation of an entire store.

Re claim 7: Minasy'930 as modified by Minasy'103 does not disclose a control unit for making a report when it is determined that the tag has not been deactivated to the effect that the security is not released to the host terminal, and also sending a notice to the effect a retry of checking deactivation of the tag is requested to the operator.

Ruppert teaches that in response to the detected result, the tag transmitter 536 as a control unit for making a report to the effect that the security is not released to the host terminal when it is determined by the detecting unit that the tag has not been deactivated. Upon host terminal receiving the notification, the host sends a message to the checkout station to request an audit of the contents with the itemized list thereby requesting the operator to recheck the transaction process including the retry of checking the deactivation process.

In view of Ruppert's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to modify the system of Minasy'930 as modified by Minasy'103 to include a well-known control unit for making a report when it is determined that the tag has not been deactivated to the effect that the security is not released to the host terminal, and to send a notice to the effect a retry of checking deactivation of the tag is requested to the operator in order to validate the transaction, to increase the security, and to enhance the transaction process. Such modification would improve the quality of transaction process. Accordingly, it would have been an obvious expedient, well within the ordinary skill in the art.

Allowable Subject Matter

7. Claim 8 is allowed.

8. The following is a statement of reasons for the indication of allowable subject matter: the best prior art of the record, Minasy'930, Minasy'103, and Ruppert, taken alone or in combination, fails to specifically teach or fairly suggest the control unit enables only the function of the detector during the period of time until the determining unit determines that the security tag is deactivated when a retry of checking deactivation of the tag is request, as set forth in the claim.

Response to Arguments

8. Applicant's arguments filed 12 February 2003 have been fully considered but they are not persuasive.

9. Applicant stated that, in the present invention, the deactivator erases the magnetism from the tag to deactivate it, while the detector provided on the counter top surface downstream from and adjacent to the deactivator is used to detect magnetism of the tag as recited in claim 2 (see page 3, lines 5+), and further stated that in Minasy et al'103, the target to be detected is an elongated strip of a high magnetic permeability. Applicant argues with respect to Minasy et al'103 that Minasy et al'103 does not teach the detector being provided adjacent to the deactivator (see page 3, lines 1+), and further argues that the antenna assembly 34 of Minasy et al'103 does not detect magnetism from the target, but instead detects a disturbance in the electromagnetic field of the antenna caused by the presence of the target; the examiner respectfully disagrees. Minasy et al'930 teaches that the tag that is attached to the commodity having a thin elongated strip of saturable material (see col. 4, lines 17+). As the commodity is place on the counter and carried by the conveyor belt 12 in the direction indicated by an arrow "A" toward the cash register 16 positioned along side of the counter, the commodity is passed over the bar code reader and the tag

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deactivator 42, which includes a free rolling cylinder 44. When the tag 30 contacts the free rolling cylinder of the deactivator 42 and rolled over the cylinder, the tag becomes deactivated, i.e., detecting affectivity of the tag (see col. 4, line 54-col. 7, line 41). Minasy et al'903 further teaches a magnetic detector (a pair of spaced apart antenna 20, 22 in the interrogating zone 24 which leads to the store exit) provided downstream from said deactivator (the antenna in the interrogating zone located beyond the counter) for detecting effectivity of the tag, i.e., magnetic field of the tag or magnetism from the tag (see col. 3, lines 42-col. 4, lines 16 and figure 1). The examiner relied on Minasy et al'103 for the teaching that lacked in Minasy et al'903, i.e., Minasy et al'930 fails to teach or fairly suggest the detector being provided adjacent to the deactivator. Minasy et al'103 teaches a checkout station 14, 16 etc. each having an elongated counter 20 having a conveyor 28, 30 for moving the merchandise on the counter top surface (see figure 1). When the packages 10 are placed on the counter 20, they are deactivated. The checkout station includes a detector (antenna assembly 34) provided adjacent to the deactivator and arranged adjacent to the counter top surface (see figure 1). It would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the checkout station having an antenna assembly as taught by Minasy et al'103 and modify the placement of the antenna in the system of Minasy et al'930 in order to immediately notify the affectivity of the tag to the operator before the customer approaching the exit gate. Due to the fact that the detector in the system of Minasy et al'930 is utilized as a theft detection system to notify the operator when the affectivity of the tag is still activated, such modification would have provided an operator to immediately identify and/or correct the transaction before next transaction is started (i.e., before a transaction for the next customer is started).

Minasy et al'930 as modified by Minasy et al'103 does not specifically teach the detector provided on the counter top surface. Since Minasy et al'103 teaches that the elongated counter and the antenna assembly includes a transmitter, a receiver, electrical circuits for energizing the transmitter and for processing the electrical signal produced by the receiver, and wherein the electrical circuits may be

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housed in the base of the antenna assembly or mounted in the counter 20; and Minasy et al'103 further teaches that the antenna assembly is almost completely isolated (i.e., electro-magnetically) from the counter such that the counter does not affect the operation of the detection system by the antenna (see col. 5, lines 4+), it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to modify the system of Minasy et al'930 as modified by Minasy et al'103 by incorporating the antenna on the counter top surface as the reader and deactivator in order to provide a commodity operation in a single continuous downstream manner. By providing the bar code reader, the deactivator, and the detector in single counter top surface would have ensure that each merchandise are read, deactivated, and detected properly as the merchandise is traveled on the checkout counter, and would have provided an immediately verification of the deactivating operation (i.e., immediately identify the effectivity of the tag) and to notify the operator before the customer approaching the exiting the gate or next transaction is started (i.e., before a transaction for the next customer is started). Furthermore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to rearrange the placement of the antenna to the counter top surface as the reader and the deactivator, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japikse*, 86 USPQ 70.

10. In response to applicant's argument with respect to Ruppert et al, like Minasy et al'903, fails to teach, mention, or suggest a magnetic detector arranged adjacent to the deactivator on the same counter top surface (see page 4, lines 12+); the examiner respectfully disagrees. Ruppert et al reference was brought in the rejection for the teaching lacked in Minasy et al'930 as modified by Minasy et al'103, i.e., Minasy et al'930 as modified by Minasy et al'103 does not disclose the system having a host terminal for controlling the operation of the entire system and a reporting unit for reporting the result of detection to the host terminal as an electronic data. Ruppert discloses a commodity information management system for managing commodities (e.g., supermarket products 500, 504) based on a bar code 506 and a

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magnetized security tag 507 affixed to the product (see col. 32, lines 1+ and figure 27). The system includes: a deactivating unit 518 for deactivating the security tag (see col. 36, lines 24+ and figure 30); a detector 516 having a determining unit 538 for determining whether or not security tag has been deactivated according to the detection result (see col. 36, lines 18 and figure 31); a host terminal 509 in communication with the check out terminal 501, the deactivator, and the detector for controlling operation of the entire check out system such as monitoring and managing the transaction process including validation, deactivating, updating, and etc. (see figures 27+); and wherein the detection notifies the detection result by setting the alarm and transmitting the signal (i.e., electronic data) to the host terminal via signal line 524 (see figure 27). In view of Ruppert's teaching, it would have been obvious to an artisan of ordinary skill in the art at the time the invention was made to incorporate the conventional host terminal and its security management function in the system of Minasy'930 as modified by Minasy'103 in order to provide a system that has a control manager that monitors and controls the entire transaction process and to improve the security measures of the merchandise in the store from theft or the like. Therefore, such modification would have enhanced the inventory control and tracking operation of an entire store.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to D. I. Lee whose telephone number is 703-306-3427. The examiner can normally be reached on Monday through Thursday from 5:30 AM to 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 703-305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



D. I. Lee
Primary Examiner
Art Unit 2876

April 9, 2003